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## Electrochemistry, Spectroscopy and Electrogenerated Chemiluminescence of Perylene, Terrylene, and Quaterrylene Diimides in Aprotic Solution

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*Published in:*  
Journal of the American Chemical Society

**IMPORTANT NOTE:** You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
1999

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### *Citation for published version (APA):*

Lee, S. K., Zu, Y., Herrmann, A., Geerts, Y., Müllen, K., & Bard, A. J. (1999). Electrochemistry, Spectroscopy and Electrogenerated Chemiluminescence of Perylene, Terrylene, and Quaterrylene Diimides in Aprotic Solution. *Journal of the American Chemical Society*, 121(14), 3513-3520.

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Figure Captions

Figure S1. The scan rate dependence of the redox peak currents of TDI (a) and QDI(b).

Figure S2 UV-vis spectra changes on reduction of PDI-1, (a) decreasing neutral, (b) increasing radical anion and (c) increasing dianion response during the reduction in  $\text{CH}_3\text{CN}$  (electrolyte: 0.1 M  $\text{TBAPF}_6$ ).

Figure S3 UV-vis spectra changes on reduction of TDI, (a) decreasing neutral and (b) increasing radical anion response during the reduction in  $\text{CH}_3\text{CN}$  (electrolyte: 0.1 M  $\text{TBAPF}_6$ ).

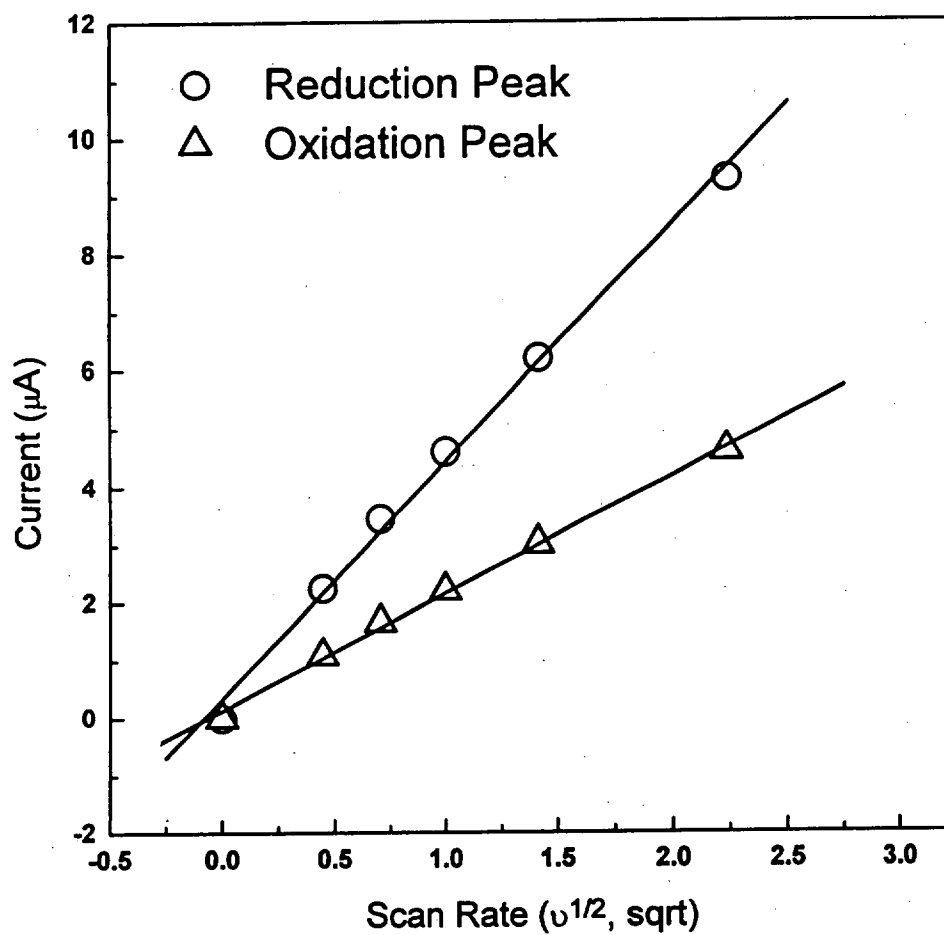


Fig. S1A

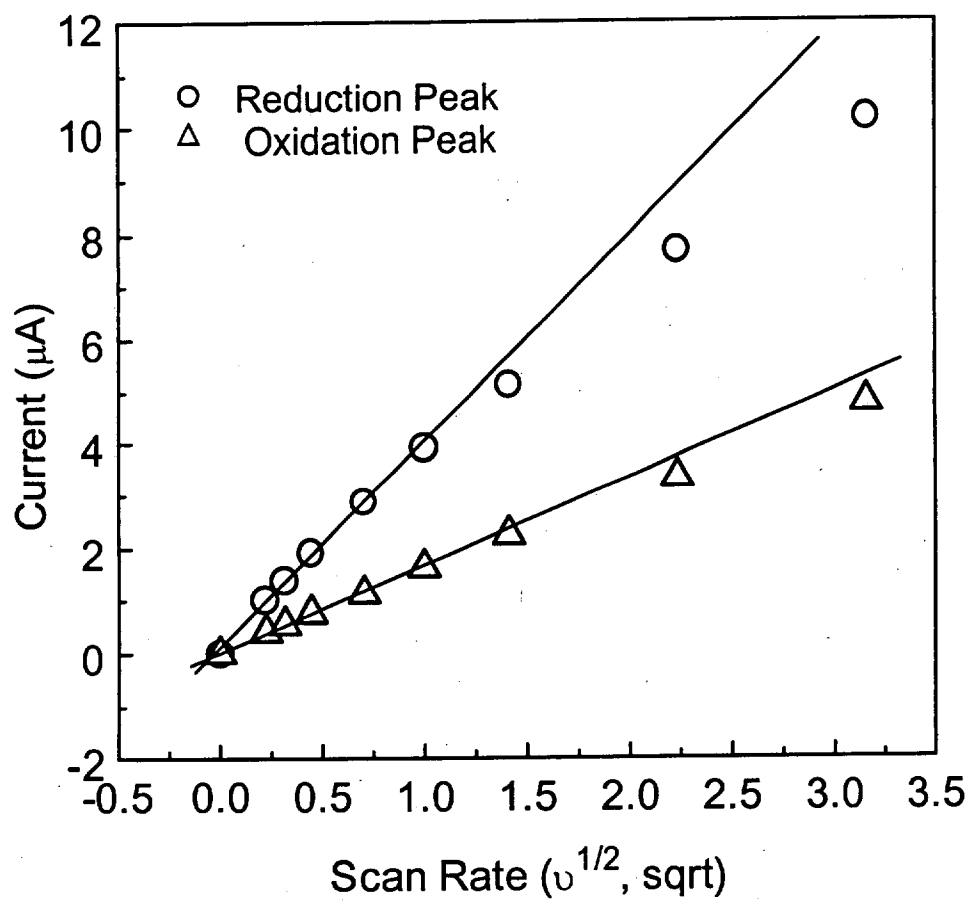


Fig. S1b

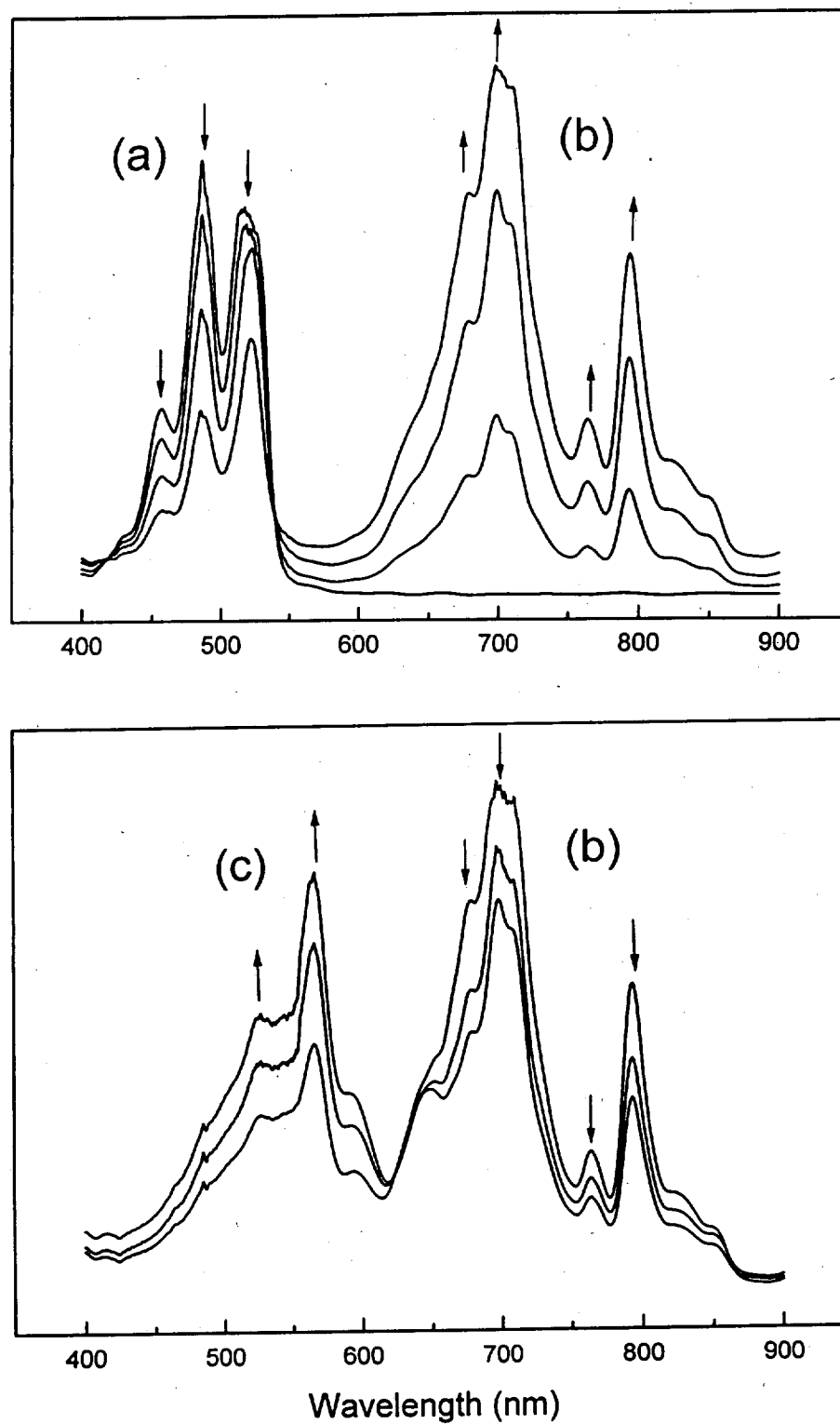


Fig. S2

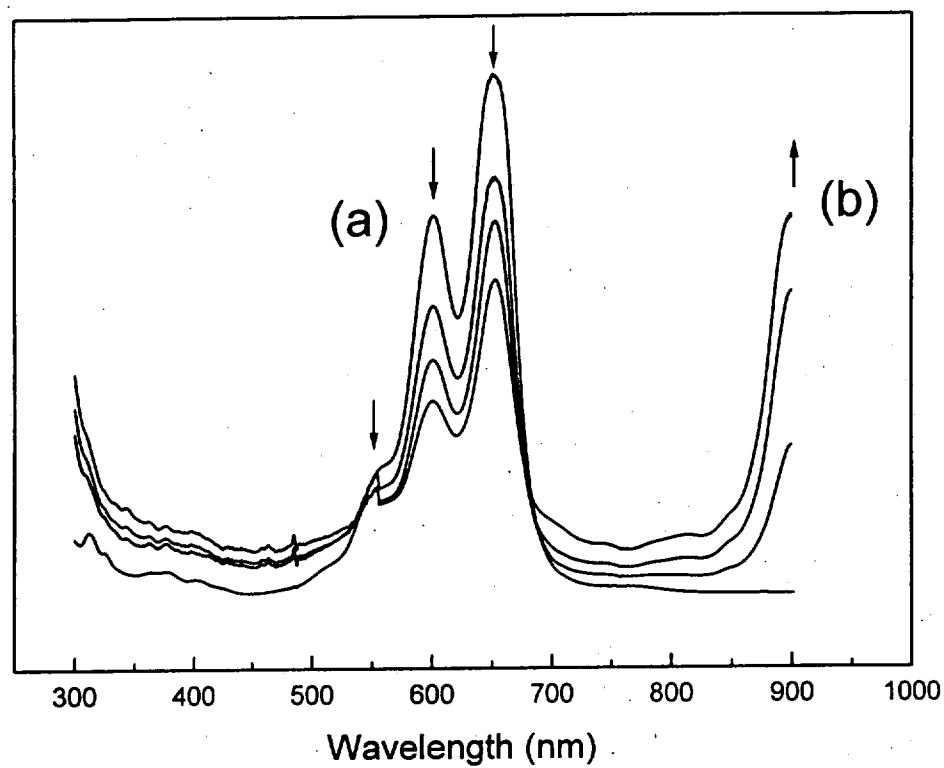


Fig. S3

Table S1. PM3 Calculated Fractional Electron Densities at the Carbonyl Oxygen Atoms ( $\delta_o$ ) in the Diimide Molecules With Different Net Charge ( $\delta$ )

|               | $\delta_o$ (PDI-1) | $\delta_o$ (TDI) <sup>a</sup> | $\delta_o$ (QDI) |
|---------------|--------------------|-------------------------------|------------------|
| $\delta = 0$  | -0.406             | -0.414                        | -0.418           |
| $\delta = -1$ | -0.486             | -0.48                         | -0.473           |
| $\delta = -2$ | -0.567             | -0.547                        | -0.530           |

<sup>a</sup>The electron density at oxygen atom in imide group with N-2,6-di-*iso*-propyphenyl substituent.